

Systematic Studies in the Genus *Myrsine* L. (Myrsinaceae) in Guayana

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In preparing the treatment of the Myrsinaceae for the *Flora of the Venezuelan Guayana*, I have encountered the following novelties described herewith.

Myrsine maguireana Pipoly, sp. nov. TYPE: Venezuela. Territorio Federal Amazonas: Cerro de la Neblina, *Bonnetia* forest NW of Caño Grande, 1,200–2,200 m, 8–9 Dec. 1957 (pist. fl, fr), *B. Maguire, J. Wurdack & C. Maguire 42318* (holotype, VEN; isotypes, MO, NY, US). Figure 1.

Ob folia coriacea elliptica vel ovata apice rotundata vel obtusa necnon basi obtusa, inflorescentias glomerulatas, atque praesertim laminas subter scrobiculatas ad *M. glaziovianam* Warming simulans sed ab ea ramulis glabris (non tomentosis), laminis glabris (nec ferrugineo-tomentellis) tum per juvenibus secus marginem glandulari-ciliatis (nec glabris), pedicellis 1–2.5 (nec 0.2–0.5) mm longisque glabris (nec hirsutis), ovario costato (nec tereti) denique corollae lobis glabris (nec dissite longeque pilosis) praeclare distat.

Shrub to 1.5(–2) m tall; branchlets terete, 5–7 mm diam., glabrous. Leaves coriaceous, elliptic to ovate, (4–)5–9 cm long, (2.3–)3–5.4 cm wide, apex and base obtuse, decurrent on the petiole, nitid above, pallid and scrobiculate below, the midrib impressed above, prominently raised below, the secondary venation obscure, conspicuously black punctate and punctate-lineate, the margin membranous, hyaline, revolute, prominently black punctate, glandular-ciliate at first when young, glabrescent, entire; petiole canaliculate, 0.4–0.9 cm long, glabrous. Staminate inflorescence: unknown. Pistillate inflorescence: an umbelliform glomerule, 4–9-flowered, the peduncle glabrous, epunctate, 1.7–2.5 mm long, built up by a series of floral bract bases; floral bracts obovate, 0.5–0.6 mm long, 0.9–1 mm wide, apex obtuse, the margin entire, densely glandular-ciliate; pedicels cylindrical, 1–1.5 mm long, accrescent in fruit to 2(–2.5) mm long, glabrous, brown punctate. Flowers 5-merous; calyx chartaceous, cupuliform, erect, translucent, unequally divided, 1.6–1.8 mm long, the tube 0.6–0.8 mm long, the lobes 1.1–1.3 mm long, apex long-acuminate, glabrous, medially brown punctate, and prominently keeled, the margin hyaline, roughly dentate, highly irregular, glabrous; corolla chartaceous, campanulate, 2.8–3.2 mm long,

translucent, the tube 0.8–1 mm long, the lobes linear-lanceolate, 2–2.4 mm long, 1.2–1.4 mm wide, asymmetric, apex acute, medially brown punctate, the margin glandular-granulose; staminodes 1.9–2 mm long, the anthers appearing epipetalous, filaments thin, hyaline, 0.1–0.3 mm long, the anthers widely ovate, 1.2–1.5 mm long, 0.9–1.0 mm wide, the apex apiculate, the base deeply cordate, the connective epunctate; pistil obnapiform, ca. 1.5 mm long, 1 mm diam., the ovary 0.8 mm long, costate, densely pellucid punctate, glabrous, the style 0.2 mm long, costate, the stigma prismatic, 0.5 mm long, 2–3-lobed, the placenta hemispherical, the ovules 3, completely imbedded. Fruit globose, 3–5 mm length and diam., densely pellucid punctate.

Distribution. Endemic to the upper slopes of Cerro de la Neblina, 1,780–2,200 m.

Paratypes. VENEZUELA. TERRITORIO FEDERAL AMAZONAS: Depto. Río Negro, Cerro de la Neblina, Camp 9, 1.2 km NE of waterfall on E headwaters of Río Mawarinuma, 1°00'N, 65°53'W, 1,780–1,820 m, 2 Feb. 1985 (fr), *B. Boom et al. 5535* (NY, US, VEN), Valle de Titricó, N of Pico Phelps, 0°56'N, 65°58'W, 2,200 m, 1 Dec. 1984 (fr), *T. Croat 59551* (MO, VEN), E escarpment of upper Caño Grande, 2,200 m, 14 Dec. 1957 (pist. fl, fr), *B. Maguire, J. Wurdack & C. Maguire 42403* (F, MO, NY, US, VEN).

Myrsine maguireana is one of several species of the genus known to have rudimentary filaments in the flowers. The presence of these filaments in a few South American taxa, and their frequency in Pacific ones, renders recognition of *Rapanea* as distinct from *Myrsine* untenable.

Myrsine picturata Pipoly, sp. nov. TYPE: Venezuela. Territorio Federal Amazonas: Cerro de la Neblina, S rim of upper basin of Caño Grande, 1,200–2,200 m, 13 Dec. 1957 (pist. fl, fr), *B. Maguire, J. Wurdack & C. Maguire 42375* (holotype, VEN; isotypes, F, MO, NY, US). Figure 2.

Quoad ramulos glabros, folia coriacea elliptica vel oblonga apice obtusa vel emarginata, necnon inflorescentias glomerulatas, ad *M. parvifoliam* A. DC. valde affinis, sed ab ea petiolis (0.7–)0.8–1 (non usque ad 0.5) mm longis, pedicellis gracilibus 0.9–1 (nec crassis 1–2) mm longis, calycis lobis secus marginem glabris (nec ciliolatis) necnon corollae lobis secus marginem perdense glandulari-gran-

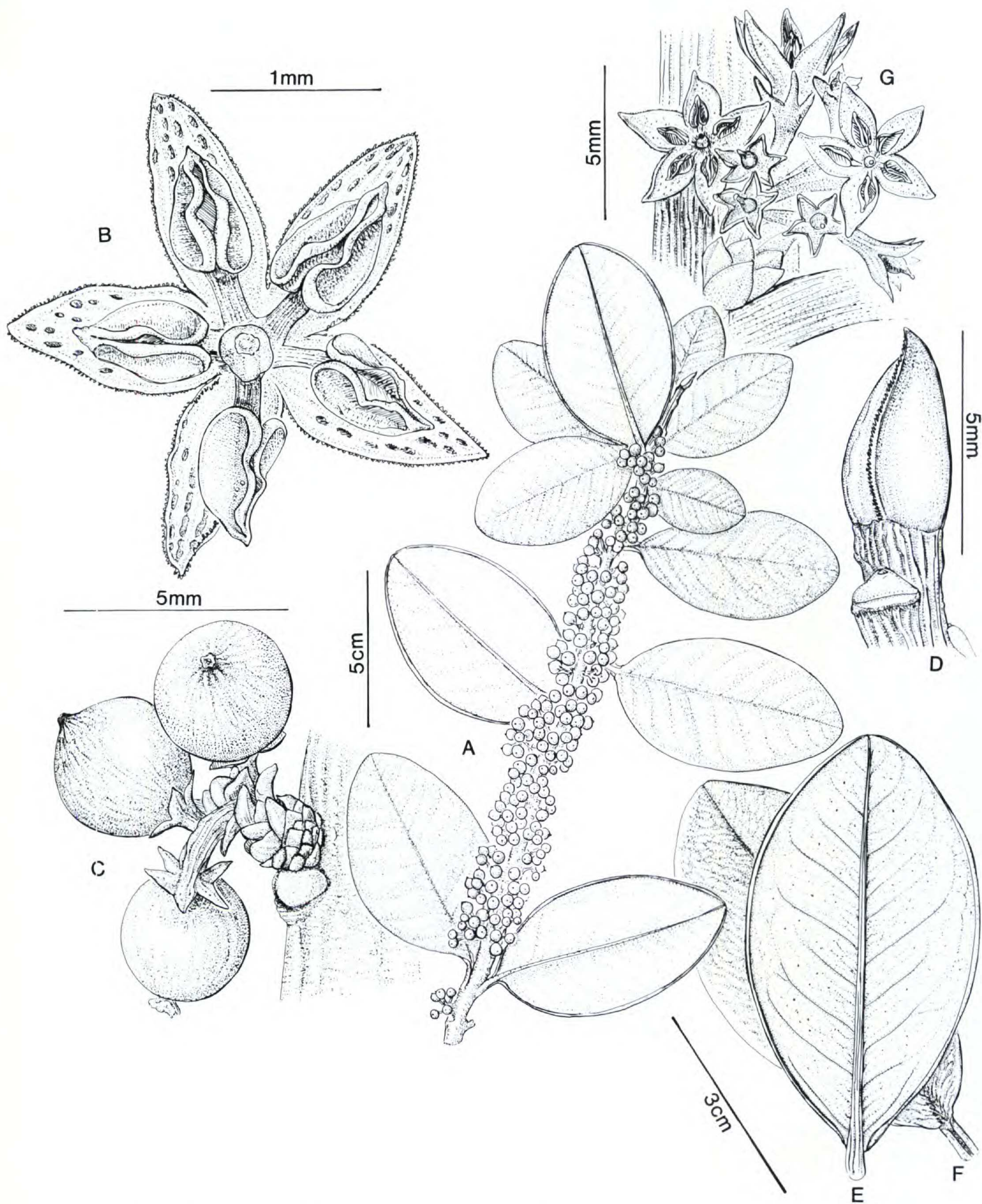


Figure 1. *Myrsine maguireana* Pipoly. —A. Habit. —B. Pistillate flower, showing filaments, apiculate anthers, and costate ovary. —C. Infructescence. —D. Apical bud, showing ciliate leaf margins. —E. Leaf, abaxial surface, showing revolute margin, scrobiculate surface, and obtuse apex and base. —F. Leaf, Adaxial surface, showing sunken costa and canaliculate petiole. —G. Pistillate inflorescence. A–G, drawn from type.

ulosis (nec glabris) atque scilicet antheris apiculatis (nec acutis) statim separabilis.

Tree to 8 m tall; branchlets terete, 4–5 mm diam., glabrous. Leaves coriaceous, elliptic to oblong,

(3–)4–6 cm long, (1.5–)1.8–2(–3) cm wide, apex obtuse to slightly emarginate, base cuneate, decurrent on the petiole, nitid above, pallid below, prominently and densely black punctate and short-lineate,

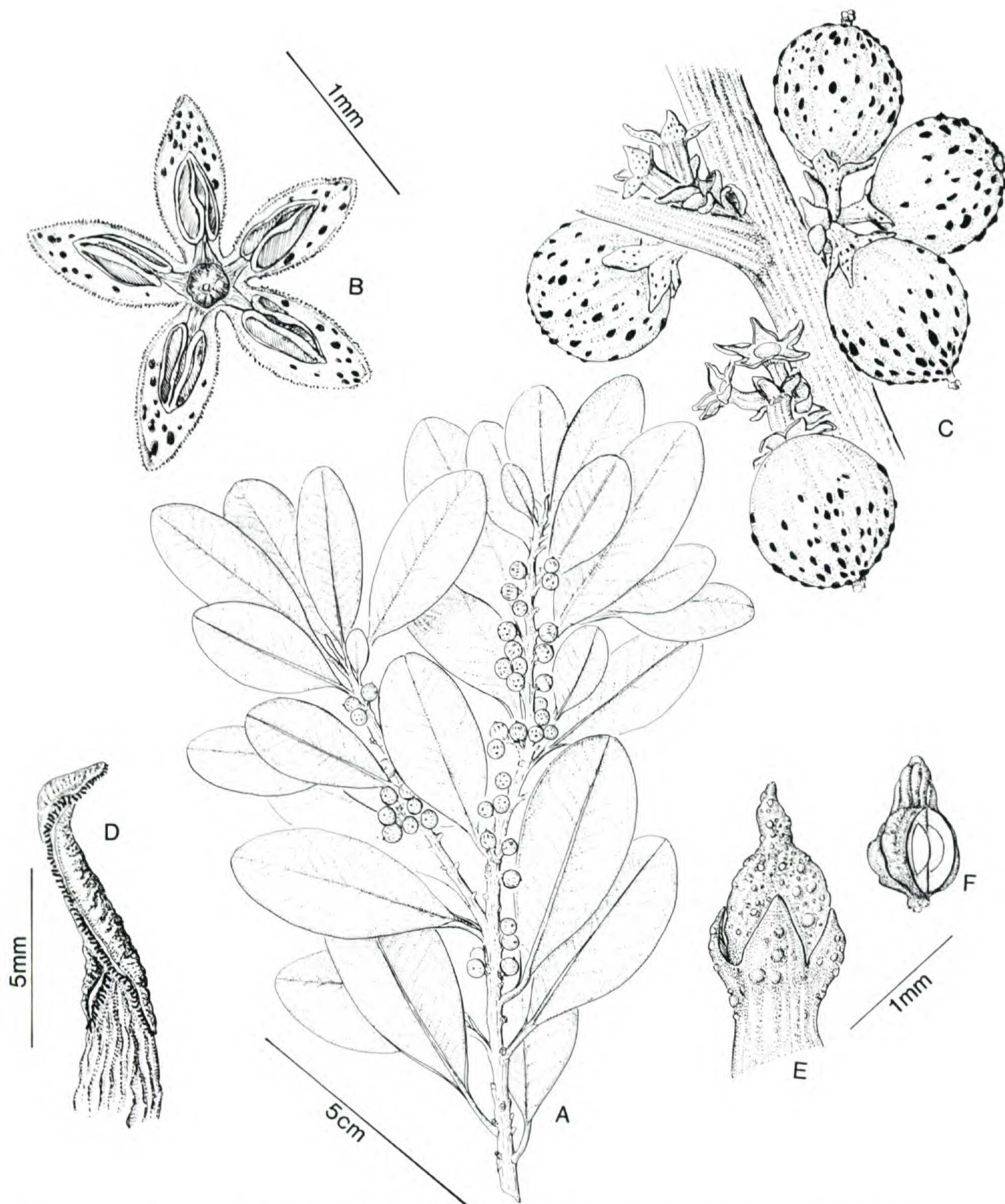


Figure 2. *Myrsine picturata* Pipoly — A. Habit. — B. Pistillate flower, showing filaments, glandular-granulose calyx lobe margins, and apiculate anthers. — C. Infructescence, showing prominently raised black punctate-lineations. — D. Apical bud, showing glandular-ciliate leaf margin. — E. Developing fruit, showing prominently raised punctations. — F. Pistil, showing ovules imbedded in placenta. A–F, drawn from type.

translucent glandular-lepidote above in bud, glabrescent; the midrib strongly impressed above, raised and ribbed below, the margin revolute, entire, hyaline, with prominently raised black punctations, densely red glandular-ciliate in bud, glabrescent; petiole canaliculate, (0.7–)0.8–1 cm long, glabrous. Staminate inflorescence: unknown. Pistillate inflorescence: glomerulate, 3–5-flowered, the peduncle glabrous, epunctate, 1.2–2.1 mm long; floral bracts

membranaceous, very widely ovate to deltate, 0.7–1.0 mm long, 0.8–1.2 mm wide, apex obtuse, densely and prominently black punctate and punctate-lineate, the margin entire, glandular-ciliate; pedicels cylindrical, 0.9–1.0 mm long, glabrous, densely and prominently black punctate-lineate. Flowers 5-merous, translucent green; calyx chartaceous, cotyliform, 1.3–1.5 mm long, the tube 0.1–0.2 mm long, the lobes ovate, 1.1–1.2 mm long, 0.6–0.8 mm

wide, apex long-attenuate, glabrous, densely and prominently black punctate-lineate, medially crasate, the margin hyaline, flat, irregular, glabrous; corolla membranaceous, campanulate, 1.8–2.0 mm long, the tube 0.5–0.6 mm long, the lobes ovate, 1.2–1.4 mm long, 0.6–0.7 mm wide, apex rounded to obtuse, densely and prominently black punctate and punctate-lineate, hyaline, the margin densely glandular-granulose, entire; staminodia 1.2–1.4 mm long, the filaments obsolete to 0.1 mm long, the anthers ovate, 0.9–1 mm long, 0.3–0.4 mm wide, apex apiculate, base sagittate, epunctate, but the connective darkened dorsally; pistil ellipsoid, 2.1–2.4 mm long, the ovary 1.5–1.8 mm long, 1.0–1.2 mm diam., densely and prominently black punctate and punctate-lineate, the stigma subsessile, conical, ca. 0.6 mm long, 2–3-lobed longitudinally, pellucid punctate, apically cuspidate, ovules 3, immersed in a globose placenta. Fruit obovoid, 4–5 mm long, 3–3.5 mm diam. when dried, densely and prominently black punctate and punctate-lineate.

Distribution. Endemic to the upper slopes of Cerro de la Neblina, 1,730–1,850 m.

Paratypes. VENEZUELA. TERRITORIO FEDERAL AMAZONAS: Cerro de la Neblina, Cumbre Camp, 2,200 m, 19 Nov. 1957 (fr), *C. Maguire, J. Wurdack & C. Maguire* 42090 (F, NY, US, VEN); Camp VII, 00°52'N, 65°58'W, 1,730–1,850 m, 10 Feb. 1985 (fr), *S. Renner* 2096 (AAU, MO, NY, US).

Myrsine perpauciflora Pipoly, sp. nov. TYPE: Venezuela. Territorio Federal Amazonas: Cerro de la Neblina, Camp VII, 5 km NE of Pico Phelps, 00°50'40"N, 65°58'10"W, 1,850 m, 1 Feb. 1985 (fr), *M. Nee* 30697 (NY, US, VEN). Figure 3.

Propter ramulos petiolos laminasque glabros necnon laminas chartaceas asymmetricasque desuper nitidas subtus obscure atro-punctato-lineatas, atque calycis lobos latissime ovatos glandulari-ciliatosque ad *M. lancifoliam* Martius affinis sed ab ea laminis desuper laevibus (non scrobiculatis) calycis lobis manifeste (nec obscure) brunnei punctatis, calycis loborum sinibus punctatis (nec epunctatis) necnon inflorescentiis 1–3 (nec 5–14)-floribus facile cognoscitur.

Tree to 4 m tall; branchlets terete, 2.5–3 mm diam., glabrous. Leaves chartaceous, oblanceolate to elliptic, (4–)4.8–5.5(–6) cm long, (1.5–)1.8–2 cm wide, apex acute, base cuneate, decurrent on the petiole, asymmetric, somewhat nitid above, pallid and black punctate-lineate below, midrib impressed above, prominently raised and brown punctate-lineate below, the margin revolute, translucent but not hyaline, entire, brown punctate, glandular-ciliate at first, early glabrescent; petiole marginate, 0.3–

0.5 mm long. Staminate inflorescence: unknown. Pistillate inflorescence: unknown. Infructescence: glomerulate, apparently 1–3-flowered, the peduncle glabrous, epunctate, (1.2–)1.6–2.4 mm long; floral bracts orbicular, 0.8–1 mm long, 0.8–1 mm wide, apex obtuse, densely pellucid punctate, the margin densely erose-ciliate; pedicels cylindrical, 1.2–2 mm long, glabrous, sparsely pellucid punctate-lineate. Fruiting calyx chartaceous, unequally divided, 1.2–1.3 mm long, translucent, densely and prominently brown punctate and punctate-lineate, with darkened glandular areas at the calyx lobe/tube sinus, the tube 0.2–0.3 mm long, the lobes very widely ovate to deltate, 1–1.2 mm long, 0.8–1 mm wide, apex acute, prominently brown punctate and punctate-lineate, flat, the margin hyaline, entire, densely glandular-ciliate. Fruit globose, 3–5 mm long and in diam., when dried, densely pellucid punctate and punctate-lineate.

Distribution. Known only from the type.

Myrsine macrocarpa Pipoly, sp. nov. TYPE: Venezuela. Territorio Federal Amazonas: Seranía Parú, Río Parú, Cerro Parú, valley above camp and valley draining eastward through cumbre, 2,000 m, 10 Feb. 1951 (fr), *R. Cowan & J. Wurdack* 31372 (holotype, VEN; isotypes, F, NY, US). Figure 4.

Ob ramulos crassos, laminas coriaceas necnon ellipticas vel obovatas, inflorescentias paucifloras ad *M. latifoliam* (Ruíz et Pavon) Sprengel f. simulans sed ab ea laminarum nervis secundariis manifeste 13–26-jugis (non obscuris) subtusque laminis obscure pellucido-punctatis (non praesertim permanifeste denseque atro-punctatis) pedicellis 1–1.4 (non 2–2.5) mm longis, calycis lobis secus marginem glabris (non ciliolatis) denique fructibus 0.8–1.2 (nec 0.5–0.7) cm diametris nunquam non praesertim dignoscenda.

Tree 7 m tall; branchlets terete, 7–10 mm diam., glabrous. Leaves coriaceous, elliptic to obovate, 9.5–16 cm long, 6.5–9.2 mm wide, apex obtuse, base acute, decurrent on the petiole, pallid and scrobiculate above and below, midrib impressed above, prominently raised below, the secondary vein pairs 13–26, visible above and below, not evidently punctate, the margin opaque, highly revolute basally, glabrescent, entire; petioles marginate, 1.5–2 cm long, glabrous. Staminate inflorescence: unknown. Pistillate inflorescence: unknown. Infructescence: glomerulate, apparently 4–8-flowered, the peduncle glabrous, epunctate, 1.2–4.2 mm long, made up of floral bract bases; floral bracts very widely ovate, 0.5–0.7 mm long, 1.0–1.2 mm wide, apex obtuse, densely pellucid punctate, the margin entire, densely glandular-ciliate; pedicels cylindrical, 1.1–1.4 mm long, glabrous, epunctate. Flowers unknown. Fruit-

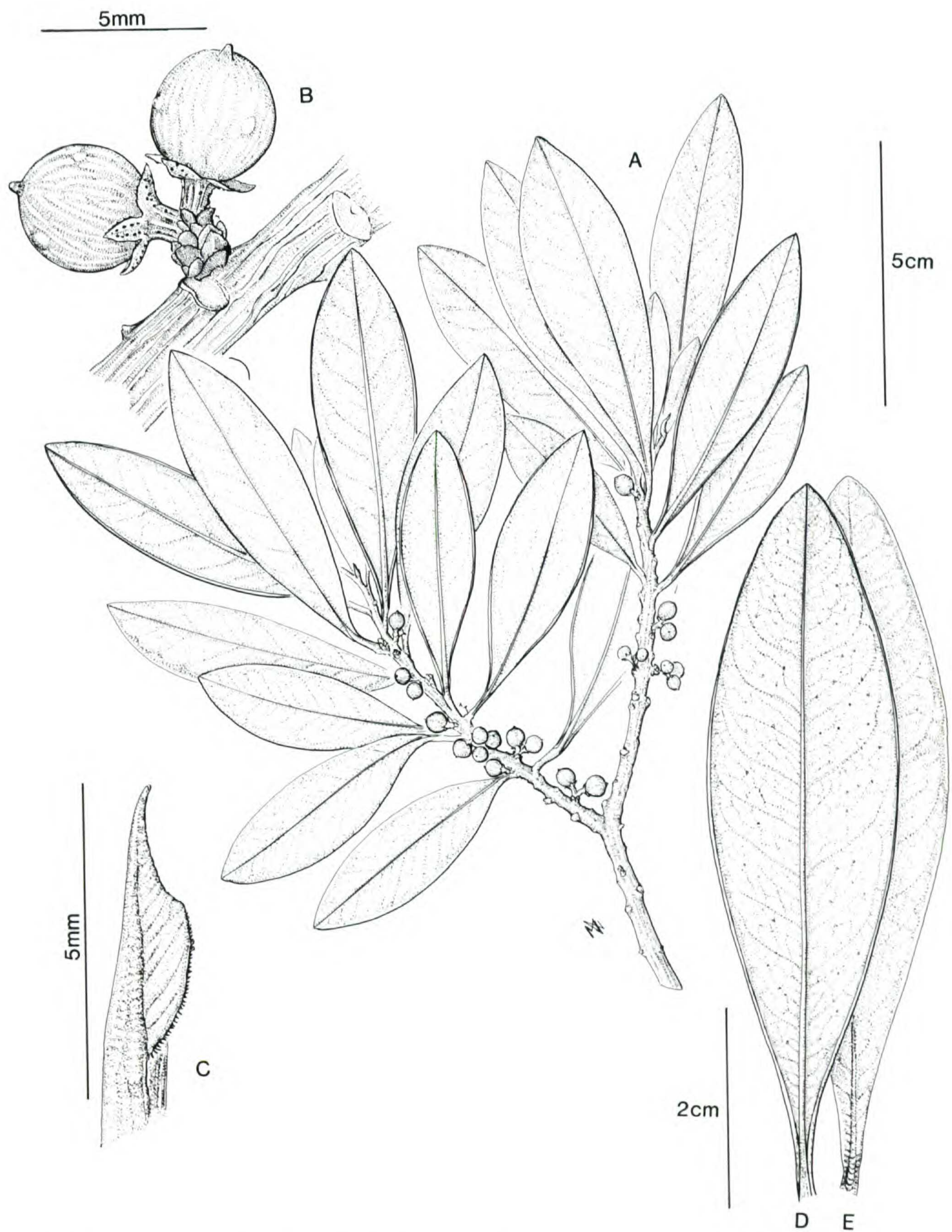


Figure 3. *Myrsine perpauciflora* Pipoly. —A. Habit. —B. Infructescence. —C. Apical bud, showing glandular-ciliate leaf margin. —D. Leaf, abaxial view. —E. Leaf, adaxial view. A–E, drawn from type.

ing calyx cotyliform, coriaceous, 1.2–1.4 mm long, the tube 0.2–0.3 mm long, the lobes very widely ovate to subdeltate, 1.0–1.2 mm long, 1.1–1.3 mm wide, the apex acute, densely pellucid punctate, the margin irregular, opaque, entire, glabrous. Fruit globose, 0.8–1.2 cm long and in diam., purplish at maturity, inconspicuously punctate.

Distribution. Known only from the type.

The treatment of *Rapanea* Aublet as a taxonomic synonym of *Myrsine* Linnaeus necessitates the following new combinations.

Myrsine roraimensis (A. C. Smith) Pipoly, comb. nov. Basionym: *Rapanea roraimensis* A. C.

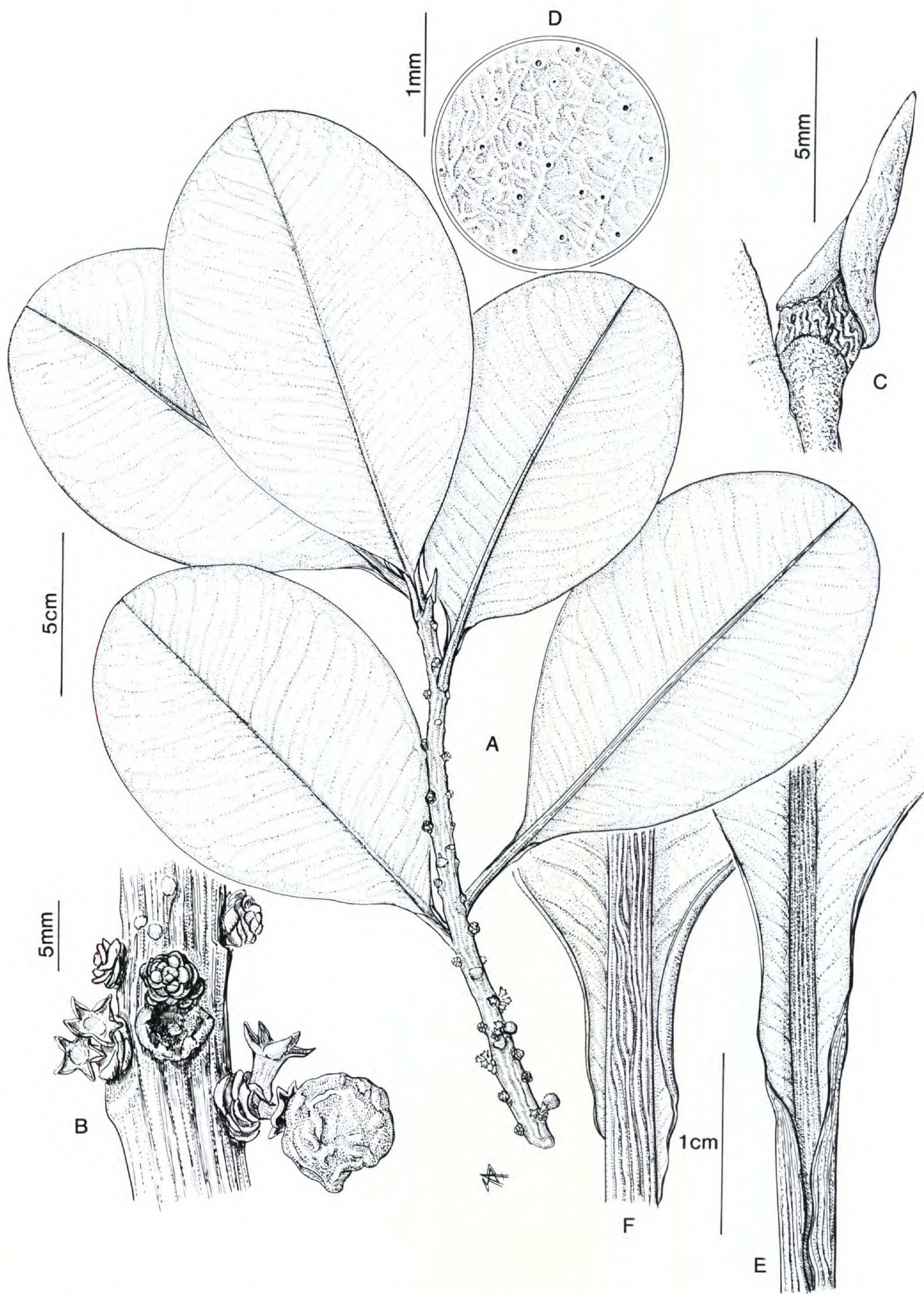


Figure 4. *Myrsine macrocarpa* Pipoly. —A. Habit. —B. Infructescence. —C. Apical bud, showing glabrous leaf margin. —D. Close-up of abaxial leaf surface, showing scrobiculate surface. —E, F. Petiole, showing decurrent leaf blade. A–F, drawn from type.

Smith, Bull. Torrey Bot. Club. 67: 296. 1940. TYPE: Venezuela. Bolívar: Mt. Roraima, 11 Jan. 1939 (stam. fl), *Pinkus* 132 (holotype, NY; isotypes, F, GH).

Myrsine nitida (Mez) Pipoly, comb. nov. Basionym: *Rapanea nitida* Mez, Repert. Spec. Nov. 16: 424. 1920. TYPE: Guyana. Mt. Roraima, (stam. fl), *Ule* 8725 (holotype, B-destroyed; neotype, to be designated).

Myrsine nitida is closely related to *Myrsine roraimensis*, but differs in its punctate-lineate (not punctate) calyx lobes, anthers much shorter than (rather than subequalling) the petals, with very wide (not narrow) longitudinal anther dehiscence slits. In addition, the densely lenticellate bark of *M. nitida*'s branchlets easily sets it apart from *M. roraimensis*.

Myrsine resinosa (A. C. Smith) Pipoly, comb. nov. Basionym: *Rapanea resinosa* A. C. Smith, Bull. Torrey Bot. Club. 67: 1940. TYPE: Venezuela. Bolívar: Río Arabapu, near Arabapu, 4,200 ft., 17 Jan. 1939 (pist. fl), *Pinkus* 84 (holotype, NY; isotypes, F, GH).

An exceedingly rare species, known from fewer than a dozen gatherings, this species has also been collected from the Guayana of adjacent Guyana.

Myrsine coriacea (Sw.) R. Br. ex Roemer et Schultes in Linnaeus subsp. **reticulata** (Steeyermark) Pipoly, comb. et stat. nov. Basionym: *Rapanea reticulata* Steeyermark, Fieldiana, Bot. 28: 477. 1953. TYPE: Venezuela. Bolívar: Cerro Roraima, between Rondón Camp and base of sandstone bluffs, 2,040–2,255 m, 30 Sep. 1944 (pist. fl), *J. Steeyermark* 58983 (holotype, F; isotypes, NY, US, VEN).

Stearn (1969) lectotypified and discussed the complete synonymy of *Myrsine coriacea* in his treatment of the Myrsinaceae for the *Flora of Jamaica*. Lundell (1971) treated the Central American populations as distinct from those of the Caribbean, referring them to *Rapanea myricoides* (Schlechtendal) Lundell (= *Myrsine myricoides* Schlechtendal). *Rapanea ferruginea* (Ruíz & Pavon) Mez (= *Myrsine ferruginea* (Ruíz & Pavon) Sprengel f.) was the name used for the South American taxa (Macbride, 1959). After conducting field studies of populations in Nicaragua, Costa Rica, Panama, Colombia, Venezuela, and Ecuador, I treat *M. ferruginea* as a synonym of *M. coriacea* because the differences in punctuation alluded to by Lundell (1971) are often found in one locality along an elevation/exposure gradient. The type of *Rapanea reticulata* repre-

sents populations throughout the Guayana Floristic Province that have smaller leaves, inflorescences 2(–3)-flowered (not (3–)5–9(–11)-flowered), with calyx lobes deltate (not longer than wide). *Myrsine coriacea* in its entirety is defined by its autapomorphic morchelliform stigma.

Myrsine minima (Steeyermark) Pipoly, comb. nov. Basionym: *Rapanea minima* Steeyermark, Fieldiana, Bot. 28: 477. 1953. TYPE: Venezuela. Bolívar: summit, Cerro Roraima, 2,620–2,740 m, 27 Sep. 1944 (stam. fl), *J. Steeyermark* 58848 (holotype, F; isotypes, NY, VEN).

The type of *M. minima* is characteristic of populations from the exposed margins of cloud forests, characterized by shorter, more orbiculate leaves with obtuse bases. Those populations from protected, more shaded areas inside cloud forests have more elongate, oblong to obovate leaves with subacute bases.

Myrsine guianensis (Aublet) O. Kuntze (= *Rapanea guianensis* Aublet) is common in Territorio Federal Delta Amacuro, and the lowland areas of adjacent Bolívar. It appears that the cork cambium of the northern South American populations is much more active than that of the Mesoamerican and Caribbean populations once referred to this taxon. The correct name for the Caribbean and Mesoamerican, lowland coastal species is *Myrsine floridana* A. DC.

DOUBTFUL AND EXCLUDED TAXA

Myrsine schomburgkiana Miquel in Martius, is actually *Elaeoluma schomburgkiana* (Miquel) Bailon (Sapotaceae), according to Pennington (1990). *Rapanea duidae* Gleason, Bull. Torrey Bot. Club 58: 447. 1931, is actually a species of *Micropholis* (Sapotaceae).

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